

# **FREIGHT ANALYSIS FRAMEWORK COMMODITY ORIGIN-DESTINATION DATABASE: 2002**

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The Freight Analysis Framework (FAF) estimates commodity flows and related freight transportation activity among states, sub-state regions, and major international gateways. The FAF also forecasts future flows among regions and relates those flows to the transportation network.

FAF<sup>2</sup> updates and improves the original FAF. FAF<sup>2</sup> is based entirely on public data sources and transparent methods, and has been expanded to cover all modes and significant sources of shipments. Because the scope and methods have changed significantly, statistics from FAF<sup>2</sup> and the original FAF should not be compared.

The 2002 FAF<sup>2</sup> Commodity Origin-Destination Database is a product of the Federal Highway Administration (FHWA), developed in cooperation with the Bureau of Transportation Statistics (BTS) through Oak Ridge National Laboratory and MacroSys Research and Technology.

This document contains basic information for using the FAF<sup>2</sup> Commodity Origin-Destination Database: 2002. Contents include:

- Description of files
- Data dictionary
- Notes on comparability of region-to-region sums with published national totals

Complete documentation and additional products are available at  
[www.ops.fhwa.dot.gov/freight/freight\\_analysis/faf](http://www.ops.fhwa.dot.gov/freight/freight_analysis/faf).

## **DESCRIPTION OF FILES**

The *FAF<sup>2</sup> Commodity Origin-Destination Database: 2002* CD contains four files: the complete database in Microsoft Access format and three other files that make up the database in comma-delimited (CSV) format.

FAFOD\_2002.MDB is the complete database containing all commodity flows between domestic origins and destinations, exports between domestic origins and foreign destinations, and imports between foreign origins and domestic destinations. Each record contains zone of origin, zone of destination, port of entry or exit (which applies only to export and import flows), type of commodity, mode of transportation for domestic portions of the flow, value in millions of dollars, and tons in thousands of short tons.

FAFOD\_DOM\_2002 contains commodity flows between domestic origins and destinations. Each record includes origin, destination, commodity, mode, value in millions of dollars, and tons in thousands of short tons.

FAFOD\_BRD\_2002 contains commodity flows by land from Canada and Mexico via ports of entry on the U.S. border to domestic destinations and from the United States via ports of exit on the U.S. border to Canada and Mexico. Records contain origin, destination, port of entry or exit, commodity, mode used on the domestic leg of the movement, value in millions of dollars, and tons in thousands of short tons. For flows between domestic origins and foreign destinations, mode is for the portion between origin and port of exit. For flows between foreign origins and domestic destinations, mode is for the portion between port of entry and domestic destination.

FAFOD\_SEA\_2002 contains commodity flows by air and water from overseas origins via ports of entry to domestic destinations and from domestic origins via ports of exit to overseas destinations. Records contain origin, destination, port of entry or exit, commodity, mode used on the domestic leg of the movement, value in millions of dollars, and tons in thousands of short tons. For flows between domestic origins and foreign destinations, mode is for the portion between origin and port of exit. For flows between foreign origins and domestic destinations, mode is for the portion between port of entry and domestic destination.

## **DATA DICTIONARY**

The 2002 FAF includes three four-dimensional matrices (for tons and value) in which the four dimensions are origin, destination, commodity, and mode -- referred to as the Freight Flow Database: Origins and destinations consist of 114 regions as defined and used in the 2002 Commodity Flow Survey (CFS) plus 17 additional international gateways and 7 international regions. Commodities are defined at the 2-digit SCTG (Standard Classification of Transported Goods) level. The complete FAF 2002 U.S. Commodity Flows Matrix contains 138 origin and destination regions, broken down by 43 commodity classes and by 7 major mode/mode combinations.

### FAF Regions

Domestic FAF regions are based on Metropolitan Statistical Areas, Consolidated Statistical Areas, and states or balances of states.

#### ID .....COMMODITY FLOW SURVEY REGIONS

- 1.....Birmingham-Hoover-Cullman, AL CSA
- 2.....Remainder of Alabama
- 3.....Alaska
- 4.....Phoenix-Mesa-Scottsdale, AZ MeSA
- 5.....Tucson, AZ MeSA
- 6.....Remainder of Arizona
- 7.....Arkansas
- 8.....Los Angeles-Long Beach-Riverside, CA CSA
- 9.....San Diego-Carlsbad-San Marcos, CA MeSA
- 10.....Sacramento--Arden-Arcade--Truckee, CA-NV CSA (CA Part)
- 11.....San Jose-San Francisco-Oakland, CA CSA
- 12.....Remainder of California
- 13.....Denver-Aurora-Boulder, CO CSA

14.....Remainder of Colorado  
15.....New York-Newark-Bridgeport, NY-NJ-CT-PA CSA (CT Part)  
16.....Remainder of Connecticut  
17.....Delaware  
18.....Washington-Arlington-Alexandria, DC-VA-MD-WV MeSA (DC Part)  
19.....Jacksonville, FL MeSA  
20.....Miami-Fort Lauderdale-Miami Beach, FL MeSA  
21.....Orlando-The Villages, FL CSA  
22.....Tampa-St Petersburg-Clearwater, FL MeSA  
23.....Remainder of Florida  
24.....Atlanta-Sandy Springs-Gainesville, GA-AL CSA (GA Part)  
25.....Remainder of Georgia  
26.....Honolulu, HI MeSA  
27.....Remainder of Hawaii  
28.....Idaho  
29.....Chicago-Naperville-Michigan City, IL-IN-WI CSA (IL Part)  
30.....St Louis, MO-IL MeSA (IL Part)  
31.....Remainder of Illinois  
32.....Chicago-Naperville-Michigan City, IL-IN-WI CSA (IN Part)  
33.....Indianapolis-Anderson-Columbus, IN CSA  
34.....Remainder of Indiana  
35.....Iowa  
36.....Kansas City, MO-KS MeSA (KS Part)  
37.....Remainder of Kansas  
38.....Louisville-Elizabethtown-Scottsburg, KY-IN CSA (KY Part)  
39.....Remainder of Kentucky  
40.....New Orleans-Metairie-Bogalusa, LA CSA  
41.....Remainder of Louisiana  
42.....Maine  
43.....Baltimore-Towson, MD MeSA  
44.....Washington-Arlington-Alexandria, DC-VA-MD-WV MeSA (MD Part)  
45.....Remainder of Maryland  
46.....Boston-Worcester-Manchester, MA-NH CSA (MA Part)  
47.....Remainder of Massachusetts  
48.....Detroit-Warren-Flint, MI CSA  
49.....Grand Rapids-Wyoming-Holland, MI CSA  
50.....Remainder of Michigan  
51.....Minneapolis-St Paul-St Cloud, MN-WI CSA (MN Part)  
52.....Remainder of Minnesota  
53.....Mississippi  
54.....Kansas City, MO-KS MeSA (MO Part)  
55.....St Louis-St Charles-Farmington, MO-IL CSA (MO Part)  
56.....Remainder of Missouri  
57.....Montana  
58.....Nebraska  
59.....Las Vegas-Paradise-Pahrump, NV CSA  
60.....Remainder of Nevada  
61.....New Hampshire  
62.....New York-Newark-Bridgeport, NY-NJ-CT-PA CSA (NJ Part)  
63.....Philadelphia-Camden-Vineland, PA-NJ-DE-MD CSA (NJ Part)  
64.....Remainder of New Jersey  
65.....New Mexico  
66.....Albany-Schenectady-Amsterdam, NY CSA  
67.....Buffalo-Cheektowaga-Tonawanda, NY MeSA  
68.....New York-Newark-Bridgeport, NY-NJ-CT-PA CSA (NY Part)

69.....Rochester-Batavia-Seneca Falls, NY CSA  
 70.....Remainder of New York  
 71.....Charlotte-Gastonia-Salisbury, NC-SC CSA (NC Part)  
 72.....Greensboro--Winston-Salem--High Point, NC CSA  
 73.....Raleigh-Durham-Cary, NC CSA  
 74.....Remainder of North Carolina  
 75.....North Dakota  
 76.....Cincinnati-Middletown-Wilmington, OH-KY-IN CSA (OH Part)  
 77.....Cleveland-Akron-Elyria, OH CSA  
 78.....Columbus-Marion-Chillicothe, OH CSA  
 79.....Dayton-Springfield-Greenville, OH CSA  
 80.....Remainder of Ohio  
 81.....Oklahoma City-Shawnee, OK CSA  
 82.....Tulsa-Bartlesville, OK CSA  
 83.....Remainder of Oklahoma  
 84.....Portland-Vancouver-Beaverton, OR-WA MeSA (OR Part)  
 85.....Remainder of Oregon  
 86.....Philadelphia-Camden-Vineland, PA-NJ-DE-MD CSA (PA Part)  
 87.....Pittsburgh-New Castle, PA CSA  
 88.....Remainder of Pennsylvania  
 89.....Rhode Island  
 90.....Greenville-Anderson-Seneca, SC CSA  
 91.....Spartanburg-Gaffney-Union, SC CSA  
 92.....Remainder of South Carolina  
 93.....South Dakota  
 94.....Memphis, TN-MS-AR MeSA (TN Part)  
 95.....Nashville-Davidson--Murfreesboro--Columbia, TN CSA  
 96.....Remainder of Tennessee  
 97.....Austin-Round Rock, TX MeSA  
 98.....Dallas-Fort Worth, TX CSA  
 99.....Houston-Baytown-Huntsville, TX CSA  
 100.....San Antonio, TX MeSA  
 101.....Remainder of Texas  
 102.....Salt Lake City-Ogden-Clearfield, UT CSA  
 103.....Remainder of Utah  
 104.....Vermont  
 105.....Richmond, VA MeSA  
 106.....Virginia Beach-Norfolk-Newport News, VA-NC MeSA (VA Part)  
 107.....Washington-Baltimore-Northern Virginia, DC-MD-VA-WV CSA (VA Part)  
 108.....Remainder of Virginia  
 109.....Seattle-Tacoma-Olympia, WA CSA  
 110.....Remainder of Washington  
 111.....West Virginia  
 112.....Milwaukee-Racine-Waukesha, WI CSA  
 113.....Remainder of Wisconsin  
 114.....Wyoming

ID .....ADDITIONAL INTERNATIONAL GATEWAYS

115.....Anchorage, AK  
 116.....Blaine, WA  
 117.....International Falls, MN  
 118.....Alexandria Bay, NY  
 119.....Champlain/Rouses Point, NY  
 120.....Portland, ME

121.....Charleston, SC  
 122.....Savannah,GA  
 123.....Mobile, AL  
 124.....Baton Rouge, LA  
 125.....Morgan City, LA  
 126.....Lake Charles, LA  
 127.....Beaumont, TX  
 128.....Corpus Christi, TX  
 129.....Brownsville/Hidalgo, TX  
 130.....Laredo, TX  
 131.....El Paso, TX

ID .....FOREIGN TRADE REGIONS

132.....Canada  
 133.....Mexico  
 134.....Latin and South America  
 135.....Asia  
 136.....Europe  
 137.....Rest of World  
 138.....Middle East

Commodity Codes

Commodity codes are based on the Standard Classification of Transported Goods (SCTG). “n.e.c.” is not elsewhere classified.

CODE...	COMMODITY NAME .....	ABBREVIATION
1 .....	Live animals and live fish .....	Live animals/fish
2 .....	Cereal grains .....	Cereal grains
3 .....	Other agricultural products .....	Other ag prods.
4 .....	Animal feed and products of animal origin, n.e.c. ....	Animal feed
5 .....	Meat, fish, seafood, and their preparations .....	Meat/seafood
6 .....	Milled grain products and preparations, bakery products .....	Milled grain prods.
7 .....	Other prepared foodstuffs and fats and oils .....	Other foodstuffs
8 .....	Alcoholic beverages .....	Alcoholic beverages
9 .....	Tobacco products .....	Tobacco prods.
10.....	Monumental or building stone .....	Building stone
11 .....	Natural sands.....	Natural sands
12.....	Gravel and crushed stone .....	Gravel
13.....	Nonmetallic minerals n.e.c.....	Nonmetallic minerals
14.....	Metallic ores and concentrates .....	Metallic ores
15.....	Coal .....	Coal
16.....	Crude Petroleum .....	Crude petroleum
17.....	Gasoline and aviation turbine fuel .....	Gasoline
18.....	Fuel oils .....	Fuel oils
19.....	Coal and petroleum products, n.e.c. ....	Coal,n.e.c.
20.....	Basic chemicals .....	Basic chemicals
21.....	Pharmaceutical products .....	Pharmaceuticals
22.....	Fertilizers .....	Fertilizers
23.....	Chemical products and preparations, n.e.c.....	Chemical prods.
24.....	Plastics and rubber .....	Plastics/rubber
25.....	Logs and other wood in the rough .....	Logs
26.....	Wood products .....	Wood prods.
27.....	Pulp, newsprint, paper, and paperboard .....	Newsprint/paper
28.....	Paper or paperboard articles.....	Paper articles

29.....	Printed products .....	Printed prods.
30.....	Textiles, leather, and articles of textiles or leather.....	Textiles/leather
31.....	Nonmetallic mineral products .....	Nonmetal min. prods.*
32.....	Base metal in primary or semi-finished forms and in finished basic shapes .....	Base metals**
33.....	Articles of base metal.....	Articles-base metal
34.....	Machinery .....	Machinery
35.....	Electronic and other electrical equipment and components and office equipment.....	Electronics
36.....	Motorized and other vehicles (including parts).....	Motorized vehicles***
37.....	Transportation equipment, n.e.c.....	Transport equip.
38.....	Precision instruments and apparatus .....	Precision instruments
39.....	Furniture, mattresses and mattress supports, lamps, lighting fittings .....	Furniture
40.....	Miscellaneous manufactured products .....	Misc. mfg. prods.
41.....	Waste and scrap .....	Waste/scrap
43.....	Mixed freight.....	Mixed freight
42.....	Commodity unknown.....	Unknown

### Modes of Transportation

- 1.....Truck. Includes private and for-hire truck. Private trucks are operated by a temporary or permanent employee of an establishment or the buyer/receiver of the shipment. For-hire trucks carry freight for a fee collected from the shipper, recipient of the shipment, or an arranger of the transportation.
- 2.....Rail. Any common carrier or private railroad
- 3.....Water. Includes shallow draft, deep draft and Great Lakes shipments. FAF<sup>2</sup> uses definitions by the U.S. Army Corps of Engineers. Shallow draft includes barges, ships, or ferries operating primarily on rivers and canals; in harbors; the Saint Lawrence Seaway; the Intra-coastal Waterway; the Inside Passage to Alaska; major bays and inlets; or in the ocean close to the shoreline. Deep draft includes barges, ships, or ferries operating primarily in the open ocean.
- 4.....Air (includes truck-air). Includes shipments by air or a combination of truck and air. Commercial or private aircraft, and all air service for shipments that typically weigh more than 100 pounds. Includes air freight and air express.
- 5.....Truck-Rail Intermodal. Includes shipments by a combination of truck and rail.
- 6.....Other Multiple Modes. Includes shipments typically weighing less than 100 pounds by Parcel, U.S. Postal Service, or Courier, as well as shipments of all sizes by by truck-water, water-rail, and other intermodal combinations.
- 7.....Pipeline and Unknown. Pipeline is included with unknown because region-to-region flows by pipeline are subject to large uncertainty.

### Other Data Definitions

**Commodity.** Based on the definition used by the 2002 CFS, commodities are products that an establishment produces, sells, or distributes. This does not include items that are considered as excess or byproducts of the establishment's operation. Respondents reported the description and the five-digit Standard Classification of Transported Goods (SCTG) code for the major commodity contained in the shipment, defined as the commodity with the greatest weight in the total shipment.

**Shipment.** A shipment is a single movement of goods, commodities, or products from an establishment to a single customer or to another establishment owned or operated by the same company as the originating establishment (e.g., a warehouse, distribution center, or retail or wholesale outlet). Full or partial truckloads are counted as a single shipment only

if all commodities on the truck are destined for the same location. If a truck makes multiple deliveries on a route, then each stop is counted as one shipment.

**Standard Classification of Transported Goods (SCTG).** The commodities shown in this report are classified using the SCTG coding system. The SCTG coding system was developed jointly by agencies of the United States and Canadian governments based on the Harmonized Commodity Description and Coding System (Harmonized System) to address statistical needs in regard to products transported.

**Tons shipped.** This represents the total weight of all shipments transported between any pair of FAF regions or within a FAF region during the course of the calendar year. Tons, in the FAF, are stated as short-tons (2,000 pounds). For freight shipped to distribution centers for subsequent reshipment, the tonnage is counted each time the goods are transported. As with value of shipments, the tonnage of a product could be counted multiple times depending on the number of times the product is transported in the production and consumption cycle. Thus, tons shipped can be, and frequently are, multiples of the estimated tons of a commodity as measured for the purposes of the Gross Domestic Product (GDP).

**Value of commodities transported.** This is defined as the net selling value, f.o.b. plant, exclusive of freight charges and excise taxes. The value data are displayed in millions of 2002 U.S. dollars.

The total value of shipments, as measured by the 2002 CFS, and hence by the FAF, and the U.S. GDP provide different measures of economic activity in the United States and are not directly comparable. GDP is the value of all goods produced and services performed by labor and capital located in the United States. In 2002, the U.S. GDP was estimated at \$10.4 trillion (measured in current U.S. dollars). The value of shipments, as measured by ORNL, is the market value of goods shipped from manufacturing, mining, wholesale, and mail-order retail establishments, as well as warehouses and managing offices of multi-unit establishments. This is estimated to be \$13 trillion in 2002.

Three important differences can be identified between GDP and value of shipments:

- GDP captures goods produced by all establishments located in the United States, while FAF measures goods shipped from a subset of all goods-producing establishments.
- GDP measures the value of goods produced and of services performed. FAF measures the value of goods shipped.
- GDP counts only the value-added at each step in the production of a product. FAF captures the value of shipments of materials used to produce or manufacture a product, as well as the value of shipments of the finished product itself. This means that the value of the materials used to produce a particular product can contribute multiple times to the value.

## Acronyms

AADT.....	Annual Average Daily Traffic
AAR .....	Association of American Railroads
AEO.....	Annual Energy Outlook
AMSA .....	American Moving and Storage Association
AOP.....	Association of Oil Pipe Lines
API .....	American Petroleum Institute
ATA.....	American Trucking Association
BEA.....	Bureau of Economic Analysis
BTS.....	Bureau of Transportation Statistics
BTS/OAI .....	Bureau of Transportation Statistics/Office of Airline Information
CBP .....	County Business Patterns
CDD .....	Construction and Demolition Debris
CFS.....	Commodity Flow Survey
COTS.....	Commercial off the Shelf
CV .....	Coefficient of Variation
DMV.....	Department of Motor Vehicles
EEZ.....	Exclusive Economic Zone
EIA .....	Energy Information Administration
EPA .....	Environmental Protection Agency
EWITS.....	Eastern Washington Intermodal Transportation Study
FAF .....	Freight Analysis Framework
FERC.....	Federal Energy Regulatory Commission
FGDC .....	Federal Geographic Data Committee
FHWA .....	Federal Highway Administration
FIPS.....	Federal Information Processing Standards
FMIP.....	Freight Model Improvement Program
GDP.....	Gross Domestic Product
GSP .....	Gross State Product
GVW .....	Gross Vehicle Weight
HERS.....	Highway Economics Requirement System
HPMS.....	Highway Performance Monitoring System
HS.....	Harmonized System
ICC .....	Interstate Commerce Commission
IPF.....	Iterative Proportional Fitting
ITDS .....	International Trade Data System
LNG.....	Liquefied Natural Gas
LPMS .....	Lock Performance Monitoring System
MARAD .....	Maritime Administration
MIO .....	Maritime Input Output
MPO .....	Metropolitan Planning Organization
MSA .....	Metropolitan and Micropolitan Statistical Area
MSW .....	Municipal Solid Waste
MTA.....	Metropolitan Transportation Authority
NAFTA.....	North American Free Trade Agreement
NAICS.....	North American Industry Classification System
NASS.....	National Agricultural Statistics Service
NDC .....	Navigation Data Center
NHPN.....	National Highway Planning Network
NHTSA.....	National Highway Traffic Safety Administration
NFD.....	Network Flow Database
NMFS.....	National Marine Fisheries Service
NOAA .....	National Oceanic and Atmospheric Administration

NSDI .....National Spatial Data Infrastructure  
 ODCM.....Origin, Destination, Commodity, Mode  
 ORNL.....Oak Ridge National Laboratory  
 PAD.....Petroleum Administration Districts  
 PCE.....Passenger Car Equivalents  
 PIERS.....Port Import Export Reporting Service  
 POC.....Port of Clearance  
 POD.....Port of Debarkation  
 POE.....Port of Embarkation  
 RCRA.....Resource Conservation and Recovery Act  
 REIS.....Regional Economic Information System  
 RO-RO Ship .....Roll-on, Roll-off Ship  
 ROW .....Rest of World  
 SCTG.....Standard Classification of Transported Goods  
 SFTA.....Strategic Freight Transportation Analysis  
 SIA.....Spatial Interaction  
 SIC.....Standard Industrial Classification  
 SQL.....Standard Query Language  
 STB.....Surface Transportation Board  
 STCC.....Standard Transportation Commodity Code  
 TEU.....Twenty-foot Equivalent Unit  
 TPE.....Truck Payload Equivalents  
 UGPTI.....Upper Great Plains Transportation Institute  
 USACE.....U.S. Army Corps of Engineers  
 USDA.....U.S. Department of Agriculture  
 USDOE.....U.S. Department of Energy  
 USDOT.....U.S. Department of Transportation  
 VIUS.....Vehicle Inventory and Use Survey  
 VTRIS.....Vehicle Travel Information System  
 WCO.....World Customs Organization  
 WCSC.....Waterborne Commerce Statistical Center  
 WCUS.....Waterborne Commerce Commodity Code  
 WTE.....Waste to Energy

#### Data Sources

##### **Carload Waybill Sample**

[http://www.stb.dot.gov/stb/industry/econ\\_waybill.html](http://www.stb.dot.gov/stb/industry/econ_waybill.html)

##### **Domestic Waterborne Commerce of the United States**

<http://www.iwr.usace.army.mil/ndc/wcsc/wcsc.htm>

##### **Federal Energy Regulatory Commission Annual Report**

[http://www.ferc.gov/about/strat-docs/annual\\_rep.asp](http://www.ferc.gov/about/strat-docs/annual_rep.asp)

##### **Fisheries of the United States Annual Report**

<http://www.st.nmfs.gov/st1/fus/current/2002-fus.pdf#search='Fisheries%20of%20the%20United%20States%20Annual%20Report%202002'>

##### **International Waterborne Commerce of the United States**

<http://www.iwr.usace.army.mil/ndc/usforeign/index.htm>

**The import and export data are found at:**

<http://www.iwr.usace.army.mil/ndc/db/foreign/data/>

**Municipal Solid Waste- BioCycle and Beck/Chartwell Studies**

[http://www.jgpress.com/archives/\\_free/000089.html](http://www.jgpress.com/archives/_free/000089.html)

[http://www.jgpress.com/archives/\\_free/000138.html](http://www.jgpress.com/archives/_free/000138.html)

**Municipal Solid Waste-Franklin/EPA Study**

<http://www.epa.gov/epaoswer/non-hw/muncpl/pubs/msw2001.pdf>

**Regional Elevator Survey: Grain Transportation and Industry Trends for Great Plains Elevators**

<http://www.ndsu.nodak.edu/ndsu/ugpti/DPpdf/DP143.pdf#search='north%20dakota%20regional%20elevator%20study'>

**Transborder Surface Freight**

<http://www.bts.gov/transborder/>

**U.S. Air Freight Movements**

<http://www.transtats.bts.gov/>

**U.S. Census Bureau-County Business Patterns 2002**

<http://www.census.gov/epcd/cbp/view/cbpview.html>

**U.S. Census Bureau-County Population Change**

<http://www.census.gov/Press-Release/www/releases/archives/population/001758.html>

**U.S. Census Bureau-County to County Migration Flow 2002**

[http://www.census.gov/Press-Release/www/releases/archives/tip\\_sheets/001397.html](http://www.census.gov/Press-Release/www/releases/archives/tip_sheets/001397.html)

**U.S. Census of Agriculture 2002**

<http://www.nass.usda.gov/census/>

**U.S. Commodity Flow Survey 2002**

<http://www.census.gov/econ/www/cfs021200.pdf>

**U.S. Department of Agriculture-Agricultural Statistics Annual Report**

<http://www.usda.gov/nass/pubs/agstats.htm>

**U.S. Department of Agriculture-Census of Agriculture 2002**

<http://www.nass.usda.gov/census/>

**U.S. Department of Energy-Energy Information Administration**

<http://www.eia.doe.gov/emeu/aer/contents.html>

**Vehicle Inventory and Use Survey**

<http://www.census.gov/econ/www/viusmain.html>

## NOTES ON COMPARABILITY OF REGION-TO-REGION SUMS WITH PUBLISHED NATIONAL TOTALS

Summation of FAF<sup>2</sup> region-to-region flows across all regions differ from published national totals, primarily due to differences in coverage and definitions.

- FAF<sup>2</sup> coverage is more complete than the original FAF and uses very different estimation methods. Statistics from FAF<sup>2</sup> should not be compared to statistics from the original FAF.
- FAF<sup>2</sup> coverage is more complete than the Commodity Flow Survey, which is limited to shipments by domestic establishments in mining, manufacturing, and wholesale. FAF<sup>2</sup> also includes shipments by foreign establishments (i.e. imports) and shipments by domestic establishments in retail, services, construction, and government, as well as logging, farm-based shipments, and crude petroleum.
- FAF<sup>2</sup> includes local and long distance trucking, which is more extensive than "intercity trucking" reported in other publications.
- FAF<sup>2</sup> totals for rail include shipments that use multiple carriers only once, while the Rail Waybill counts each terminal to terminal move separately. FAF<sup>2</sup> classifies rail-truck and other intermodal combinations separately from rail-only, while rail-only and rail combinations with other modes are all counted together in the Rail Waybill.
- FAF<sup>2</sup> totals for water include shipments that pass through ports only once, while the Corps of Engineers counts an international shipment to a domestic port that then moves by inland waterway or in domestic coastwise traffic twice. FAF<sup>2</sup> classifies water-rail and other intermodal combinations separately from water-only, while water-only and water combinations with other modes are all counted together in Waterborne Commerce Statistics . Additionally, once a maritime import arrives at a U.S. port of entry, FAF<sup>2</sup> appropriately assigns the shipments to the mode that transports the goods from the port to the final inland destination.
- Summations FAF<sup>2</sup> region-to-region flows will not quite match FAF<sup>2</sup> totals in publications such as FHWA's *Freight Facts and Figures* and *Freight in America* by BTS. FAF<sup>2</sup> region-to-region totals are 0.67 percent lower in tons and 3.0 percent lower in value than the published national totals. Differences are due to the treatment of air imports and other adjustments which are explained in the FAF<sup>2</sup> technical documentation.

The published totals from FAF<sup>2</sup> include imports and exports by the mode used to enter or leave the country, while the region-to-region files identify the domestic mode of imports and exports.